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Wealth, Income and Savings

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THE MEASURE OF NATIONAL THRIFT

THE thrift of a nation is measured by the excess of its production over its consumption. This excess constitutes the nation's savings. In arriving at any statistical measurement of the ability of the nation to save, the starting point must, therefore, be the nation's product. This is commonly called the national income. It consists of all commodities and services brought forth within the country during the period chosen as the statistical time unit. The excess of this product over the customary minimum of living measures the ability to save. What we need, then, in arriving at a statistical estimate of the saving power of a nation is first of all as exact a notion as possible concerning the size of the national income; and second a comparison of our present national income with that of the past.

NATIONAL WEALTH

Unfortunately, at least from our point of view, much greater attention has been given to statistics of wealth than to those of income. The figures of national wealth are by no means as important for the purpose in hand as are the figures of national income. They are of some importance, however, as bearing upon the nation's productive capacity. The wealth of the nation consists largely of its technological equipment—of the things, that is, which assist the people in bringing forth the national income. Other things being equal, the larger this equipment the greater will be the

income out of which new capital can be accumulated.

NATIONAL INCOME

The best evidence as to the amount of the national income which can be saved without impinging upon our standard of living is to be found by comparing the amount saved in the past with the national income of the past, and thus arriving at the normal consumption of the people. If there were an actual inventory of all the goods and services produced within the year and we had definite facts showing the disposition of these products through consumption or addition to our industrial equipment, then it would be possible to state the excess of production over consumption and the use of the amount saved. Or if we had an inventory of all goods in existence within the nation at the end of each year which we could compare with a similar inventory at the beginning of the same period, we could calculate the excess of production over consumption from the increase in physical wealth.

To the increase as shown by such inventories it would be necessary to add the amount of goods loaned to foreign nations and those used in paying off our foreign indebtedness. We should then have to deduct the goods in the inventory which represented loans to us by foreign nations or repayments by them of debts which they had formerly owed in this country. Such statistics manifestly could not be obtained except by taking a census on

practically the same scale as the national decennial census. Since there are no statistics compiled for this express purpose, it is necessary to utilize data which have been gathered for other purposes by various public and private agencies, and to interpret them in such manner as to throw light upon the problem here under investigation.

We have an index of the savings of the past in the statistics of wealth at various times. The best evidence of thrift is to be found in the capital actually accumulated. By comparing produced wealth in existence within a country at various dates we can arrive with a fair degree of accuracy at the savings of the people during the period which intervenes between the

two summations of wealth. If we can arrive at the growth of wealth which was effected through savings in the pre-war period and at the national income then and now we will be in position to judge of the possible accumulation of capital at the present time.

INCREASE IN VALUE OF NATIONAL WEALTH

The fountain head of practically all information on the subject of our national wealth is the Census Bureau at Washington. In its volume entitled "Wealth, Debt, and Taxation" (1913) it shows the comparative wealth for 1912, 1904, and 1900. Table I is compiled from the data which that volume contains.

TABLE I
Estimates of Capital Wealth in the United States, 1912, 1904 and 1900

Item	1912	1904	1900	Increase 1904-1912
Real estate.....	\$110,676,393,071	\$62,341,472,627	\$52,537,628,930	\$48,334,860,444
Live stock, farm imple- ments.....	7,606,613,533	4,918,781,599	4,056,249,246	2,687,831,934
Manufacturing tools, ma- chinery, etc.....	6,091,451,274	3,297,754,180	2,541,046,639	2,793,697,094
Gold and silver coin and bullion.....	2,616,642,732	1,998,603,303	1,677,379,825	618,039,429
Railroads and their equip- ment.....	16,148,532,502	11,244,752,000	9,035,732,000	4,903,780,502
Street railways and other public utilities.....	10,265,207,321	4,840,546,909	3,495,228,299	5,424,660,412
All other, <i>not including</i> per- sonal clothing, furniture, etc.....	21,576,065,840	10,212,281,792	8,293,242,540	11,363,784,048
Total.....	\$174,980,846,273	\$98,854,192,410	\$81,636,507,481	\$76,126,653,863
Total other than real estate	\$64,304,513,202	\$36,512,719,783	\$29,108,878,551	\$27,791,792,419

From this table it appears that the wealth of this country, other than real estate and personal belongings used for current consumption, increased by \$28,000,000,000 during the period 1904 to 1912, or an average of \$3,-

500,000,000 per annum. Real estate increased \$48,000,000,000, or about \$6,000,000,000 per annum. The total increase was, therefore, at the average rate of \$9,500,000,000 per annum. But by no means all of this was the

result of capital accumulation. Much of this increase in the value of our national wealth was the result of price changes of things in existence at both dates.

Factors Affecting Increase in Total Value

Increase in Land Values.—Real estate consists of land and improvements. Only the improvements, such as new buildings, draining, clearing, fence and road building, and the planting and cultivation of orchards, are the result of production and savings. It is necessary, therefore, to eliminate from the \$6,000,000,000 per annum increase in real estate, that portion which represents merely increase in value of land as distinguished from improvements.

Change in Price Level.—In the valuation of the improvements, also, the change in the price level manifests itself in a higher valuation in the latter years. A correction must be made for this element. The same is true of many of the items other than real estate, especially those which were valued by a process of applying prices to inventories rather than by taking their cost of construction.

Causes for Increase in Land Value

Improvements.—The whole increase in the value of land, considered as an economic category, must be eliminated. Unfortunately we have no index number of land values in the United States. The most practicable method of procedure is, therefore, to estimate as best we can the percentage of the total value of real estate which consists of land as distinguished from improvements at each date. An examination of the real estate assessments of twenty-four states which separate improve-

ments from land values shows that approximately 40 per cent of the total real estate values are to be credited to improvements. The communities which make up this group are of a widely diverse nature, including as they do Arizona and Idaho on the one hand and Greater New York on the other. They may, therefore, safely be taken as representative of the general situation in the United States. The dates of the valuations are all much nearer to the year 1912 than to 1904, however; in fact, the mean date of all the assessments would be 1912. It is quite possible that the ratio in 1904 may have been somewhat different. But it seems unlikely that this difference was very great.

Growth of Population.—The general profitableness of the farming industry and the growth of population in our industrial centers have no doubt led to a very rapid rate of increase in the value of real estate during this period. But it is equally true that there has never been in all our national history such a rapid investment in buildings of all kinds as during the decade 1904–1914. Indeed the absorption of capital by building operations was one of the chief sources of the increased demand for capital and the rise in interest rates which has characterized this period.

Increase in Capital Accumulations

We cannot be seriously in error, then, if we take the value of improvements in 1904 at 40 per cent of total real estate values. This gives an average annual increase in the value of real estate improvements of \$2,400,000,000 during the period 1904–1912. This added to the \$3,500,000,000 increase per annum in other wealth gives \$5,900,000,000 as the total increase in

wealth other than personal clothing, furniture, etc., during this period. A portion of this increase, however, is due to a rise in the price level and not to additional production and savings. Some of the items like street railways and other public utilities, which are included on the basis of their cost, and like gold and silver bullion, call for no adjustment.

According to the Bureau of Labor wholesale price index number, the price level rose 17 per cent for all commodities between 1904 and 1912. The prices of metals and lumber rose 18 per cent. Taking all the items of capital wealth together, a 10 per cent allowance for increases in values must probably be made in the 1912 valuation. If the latter be adjusted for this price change, we find that the average addition to the wealth of the nation through capital accumulation and investment was approximately \$5,000,000,000 per annum, exclusive of clothing, furniture, etc. But the accumulation of capital in the latter part of this period and in the years just before the outbreak of the European war was undoubtedly more rapid, and reached a figure somewhat over \$6,000,000,000.

This amount is less than the figure of \$7,500,000,000 arrived at by George E. Roberts of the National City Bank of New York.¹ Mr. Roberts uses practically the same method as the one employed here. He, however, makes no deduction for the increase in the price level from 1904 to 1912. It is also slightly lower than Sir George Paish's estimate published in the *London Statist*, May 24, 1913. He places the annual growth of wealth in the United States at \$1,400,000,000.

¹ *Annals of the American Academy*, November, 1916, p. 287.

Amount of National Income

What was the size of the national income out of which this capital was accumulated? The best estimate of income during the pre-war period is that of Professor W. I. King in his book entitled *The Wealth and Income of the People of the United States*. He places the total income in 1910 at \$30,500,000,000. This figure may be brought forward to 1913 by taking the growth in railway gross revenues as the best available index of the increase in national product. These revenues in 1913 were 114 per cent of those of 1910. A proportionate increase would make the total income in 1914 \$34,700,000,000. If the national savings be taken at \$6,500,000,000 they constitute approximately 19 per cent of the national income. The consumption of the people for the year 1913, was, on the basis of these figures, slightly in excess of \$28,000,000,000.

After we had recovered from the depression into which industry and finance were thrown by the outbreak of the European war, our national income grew rapidly. During the latter part of 1915 and throughout 1916 and 1917 there was a steady increase in the output of goods as measured in physical terms. This acceleration of productive activity probably reached its height sometime in the autumn of 1917. Thereafter the rigor of the winter of 1917 and 1918, with its coal shortage and the withdrawal of men from industry through the selective draft prevented a further increase in productive output. The extent of this increase in production has been variously estimated, but an increase of 20 per cent expresses the fact within narrow limits of error.

Increase in Money Value of National Income

This increase of output coupled with the increasing prices in which that output was measured increased the money value of our national income at an amazing rate. Thus the total personal and corporate income reported to the Commissioner of Internal Revenue in 1913 amounted to \$8,614,000,000,000. In 1916 it amounted to \$15,066,000,000, and in 1917 to \$24,382,000,000. It is true that in 1917 over 3,000,000 persons reported who had made no reports of personal income in the previous years, but even after these are eliminated the corporate and personal incomes remaining amount to \$17,700,000,000.

The following table (Table II), showing the number of income tax returns by persons with incomes of \$3,000 and over, shows the effect upon personal incomes:

TABLE II
Number of Personal Income Tax Returns for the United States, 1914 and 1917

Income class	1914	1917
3,000 to 5,000.....	\$149,279	\$560,763
5,000 to 10,000.....	127,448	270,666
10,000 to 25,000.....	58,603	112,502
25,000 to 50,000.....	14,676	30,391
50,000 to 100,000.....	5,161	12,439
100,000 to 150,000.....	1,189	3,302
150,000 to 300,000.....	769	2,347
300,000 to 500,000.....	216	559
500,000 and over.....	174	456
Total.....	357,515	993,425

NATIONAL INCOME FOR 1917

The value of farm products increased from \$9,849,512,511 in 1913 to \$19,443,849,381 in 1917. These figures furnish striking evidence of what happened to national income during this period. In another place² I have estimated that the national income for 1917 totaled \$65,515,000,000, divided as follows:

TABLE III
Total National Product for 1917, by Industries

Extractive, manufacturing, and public utilities:		
Farmers and farm laborers, including the members of their families.....	\$14,500,000,000	
Manufacturers and manufacturing laborers.....	25,800,000,000	
Mine operators and miners.....	3,675,000,000	
Steam railroads and their employes.....	3,040,000,000	
Public utilities and their employes.....	2,750,000,000	
Subtotal.....		\$49,765,000,000
Mercantile and professional activities:		
Wholesale merchandisers.....	\$2,250,000,000	
Retail dealers.....	2,000,000,000	
Professional services.....	2,500,000,000	
Services rendered by others, including government employes	9,000,000,000	
Subtotal.....		\$15,750,000,000
Total national income.....		\$65,515,000,000

Since that estimate was made the Commissioner of Internal Revenue has published his *Statistics of Income* for 1917. The analysis of income from business (personal returns) on page 16 of that volume and of corporate returns

on page 19 convinces me that the estimate presented above is somewhat excessive for manufactures and manu-

² The Taxable Income of the United States, *Journal of Political Economy*, December, 1918, p. 954.

facturing laborers and for mine operators and miners; but that it is very much understated for wholesale and retail dealers. The total of \$65,515,000,000 is pretty well supported, however, by the *Statistics of Income*. The personal services rendered by people other than those engaged in extractive, manufacturing, transportation, public utility and trading industries still remain the doubtful element in the estimate. But this is also the element in the national income which is of least importance in capital formation. Capital consists of produced goods and not of services rendered.

This estimate, while made entirely independently of Professor King's computation of national income, nevertheless confirms it. This is shown in the estimate of B. M. Anderson, Jr., of the National Bank of Commerce of New York City, who places the national income for 1917 at \$68,000,000,000 in an article in the *New York Times Annalist*, January, 1918. Dr. Anderson arrives at this figure by taking as a point of departure King's estimate for 1910 and increasing it by a factor which expresses the increase in the quantity of physical product multiplied by the rise in the general price level as shown by Dun's index number.

INCREASE IN NATIONAL SAVINGS DURING 1917

This increase in national income presented the possibility of largely increased savings. Thus if the national income increased 20 per cent through higher productive activity, it amounted to \$41,400,000,000 in 1917 even when measured in terms of the price level of 1913. If the 28,000,000,000 units of consumption of 1913 increased by 10 per cent, then the nation's consumption, as measured in 1913 prices, would have been 30,800,-

000,000 units. The excess of production over consumption in 1917 as measured in the 1913 price level would then have been 10,600,000,000 units, an increase of over 60 per cent in capital accumulation measured in physical terms. Measured in terms of money, the increase would of course have been much greater.

The level of wholesale prices, as shown by the Bureau of Labor Statistics index, by Bradstreet's index, and by the unusually comprehensive index number of the Price Section of the War Industries Board, was 175 in 1917, as against 100 in the period immediately preceding the war. If our 10,600,000,000 units of savings be translated into 1917 dollars, our annual savings in that year stood at \$18,550,000,000. The increase in production made it possible to raise the percentage of savings from 19 per cent in 1913 to 28 per cent in 1917 in the face of an absolute increase in consumption. The volume of savings was maintained during 1918 and was probably somewhat increased through the constant pressure brought upon all classes to decrease consumption in the interest of war finance.

These figures show that, given an increase of 20 per cent in productive output, it was possible to increase savings enormously without any increase in felt abstinence. The figures of savings here presented for 1917 are so stupendous and the assumptions of fact employed in reaching them are so broad that they must be tested by more direct and dependable evidence before any reliance can be placed in them.

TOTAL VOLUME OF SAVINGS

All wealth produced and not consumed is disposed of in one of three ways. It has been paid to the govern-

ment in taxes, it has been reinvested in additional plant, working capital, or some form of physical property by the individual or business organization which saved it, or it has been brought to some investment market. In the latter case evidences of proprietorship or indebtedness in the form of securities of corporations or bonds of state and municipal governments or of the federal government are issued in return. An estimate of the growth in government taxes, reinvested surplus and new securities issued will give a reasonably accurate picture of the total volume of savings.

The Investment Market

Table IV sets forth the statistics which are available for the years 1913–1918 concerning securities marketed, together with gold and securities repurchased from abroad. The figures here given for industrial and railroad securities are those listed by the *Journal of Commerce*; there are no published figures for other securities. These are considerable in volume, as is shown by a comparison of the figures given by the *Journal of Commerce* with the actual increase in capital stock

and bonded and other indebtedness available in the reports of the Commissioner of Internal Revenue for the years 1909–1913.

During this period the *Journal of Commerce* reports the new securities issued as \$7,157,084,000, while the actual increase for all corporations reporting to the Bureau of Internal Revenue was \$17,501,954,000. Even allowing for the refundings in the *Journal of Commerce* figures and for discounts in the Internal Revenue figures, it is reasonable to put the volume of other corporate securities issued at a minimum of \$1,000,000,000 per annum for ordinary years. In 1916 the volume of corporate financing was far in excess of the ordinary year, and no doubt ran as high as \$1,500,000,000 in excess of the *Journal of Commerce* figures. In 1918 the needs of war finance absorbed nearly all the available funds, and the issue of securities was materially reduced. When we add these estimates of additional securities issued, to the subtotal, which includes only the published figures, we arrive at a grand total of \$3,053,000,000 for 1913; \$7,563,000,000 for 1916; and \$14,510,000,000 for 1918.

TABLE IV
Capital Increase Shown by Investments During 1913 and 1915–1918
(in Millions of Dollars)

Item	1913	1915	1916	1917	1918
Industrial and railroad securities*	\$1,645	\$1,435	\$2,186	\$1,529	\$1,345
Government securities					
Foreign	0	1,275	1,381	805	640
United States	0	0	0	5,833	11,760
State and municipal bonds†	408	493	496	445	265
Gold and securities repurchased from abroad	0	1,300	2,000	700	0
Subtotal	\$2,053	\$4,503	\$6,063	\$9,312	\$14,010
Other securities, less deductions for refunding and for discount	1,000	1,000	1,500	1,000	500
Total	\$3,053	\$5,503	\$7,563	\$10,312	\$14,510

* Reported in the *Journal of Commerce*.

† Reported in the *Bond Buyer*.

This table shows that a very substantial amount of savings came to the investment market in 1913; that this amount had trebled by 1917; and had more than quadrupled in 1918. But it does not express the total volume of capital accumulation in the United States in the respective years. In a normal pre-war year less than two-thirds of our capital accumulation came to the market.

Industrial and Agricultural Profits

Two of the principal sources of capital accumulation in America which do not appear on the investment market are industrial and agricultural profits. One of the reasons why the rate of interest fluctuates so little under the stimulus of the demand for capital in times of prosperity and high profits is that in such times the supply of capital accumulated out of these profits is unusually large. To a considerable degree the industries supply their needs for capital out of their own profits. The failure to realize this fact has led to an underestimation of the volume of capital accumulation in this country, and is in no small measure responsible for the derogation in which we have held ourselves in this matter of thrift. In addition to this lack of attention given to certain sources of accumulation, there has been a rather common failure to distinguish between accumulation and investment.

Capital Accumulations in Industry

In a country like France, for example, which is less industrialized than the United States, where the corporate form of organization is less common and where there are fewer opportunities within the country calling for

capital, a much larger part of the annual accumulation of capital comes to the investment market. Savings there are largely in the form of investment in securities, often of foreign securities. Savings of this character become evident and are easily measured in statistical terms. In France we have nothing which corresponds to the great mass of corporate savings which are accumulated in the United States. These do not usually come to the investment market, and, therefore, attract little attention, but they are none the less real, and must be taken into consideration in any comparison between the United States and other countries. The railroads and industrial concerns in the United States have grown very rapidly, and in recent years they have added largely to the capital accumulations of the country through their additions to surplus. Practically all of this surplus was reinvested in extensions to plant and working capital made necessary by the large expansion of industry during these years. Table V shows this increase in surplus during the years 1911-1918 for all corporations in the United States.

TABLE V
Corporate Income, Dividends, and Surplus,
1913-1918
(in Millions of Dollars)

Year	Net income	Dividends	Surplus before taxes
1911.....	\$3,213	\$2,225	\$988
1912.....	3,832	2,498	1,334
1913.....	4,340	2,871	1,469
1914.....	3,711	2,667	1,044
1915.....	5,184	2,766	2,418
1916.....	8,766	3,784	4,982
1917.....	10,730	4,651	6,079
1918.....	9,500*	4,100	5,400

* Estimated.

The method of arriving at these figures I have set forth in an earlier paper.³ It is not necessary to repeat the details here. One sample will suffice to show the striking nature of the statistics. An examination of the published reports of mining, manufacturing and mercantile corporations shows that their net earnings, after interest and taxes, amounted to \$900,000,000 in 1915, of which they retained \$497,000,000, or 55 per cent as surplus. Their earnings in 1916 had increased to \$1,883,000,000 of which they retained \$1,219,000,000, or 65 per cent, as surplus. In 1917 these 363 corporations earned \$2,316,000,000, and their surplus for the year, before deducting income and excess profits taxes amounted to \$1,585,000,000. The reports of only 224 of these corporations are available for the period since 1911.

Figures showing their earnings and surplus, which are set forth in Table VI, show that in the earlier years, 1911 to 1914, they retained only 33 per cent of a much smaller income.

³ War and Supply of Capital, *Proceedings American Economic Association*, 1918, p. 85.

TABLE VI
*Statistics of Income, Dividends, and Surplus for
224 Corporations*
(in Millions of Dollars)

Year	Net income	Dividends	Surplus	Per cent surplus to net income
1911.....	\$431	\$287	\$144	\$33.3
1912.....	487	299	188	39.1
1913.....	507	328	179	35.3
1914.....	381	295	86	22.2
1915.....	664	327	337	50.9
1916.....	1,364	526	838	61.4
1917.....	1,750	600	1,150	65.7

Corporate Savings and Taxes

It must be evident, therefore, that no accurate comparison can be made of the volume of savings in the different years without including corporate surplus. In 1917 and 1918, a large part of corporate savings was paid as taxes to the government; the same is true of a portion of individual savings. It is, therefore, necessary to add war taxes paid or reserved in order to make a complete summary of the savings of these latter years. Table VII sets forth a more complete statement of savings for the various years than was given in the table of investments given above.

TABLE VII
Capital Increase Shown by Investments, Surplus and War Tax Reserves During 1913 and 1915-1918
(in Millions of Dollars)

Item	1913	1915	1916	1917	1918
Industrial and railroad securities.....	\$1,645	\$1,435	\$2,186	\$1,529	\$1,345
Other securities, less deductions for refunding and for discount.....	1,000	1,000	1,500	1,000	500
Government securities					
Foreign.....	....	1,275	1,381	805	640
United States.....	....	....	....	5,833	11,760
State and municipal bonds.....	408	493	496	445	265
Corporate surplus after taxes.....	1,469	2,418	4,982	4,500	2,000
Gold and securities repurchased from abroad.....	....	1,300	2,000	700	....
War taxes paid or reserved.....	....	....	....	3,000	5,000
Total.....	\$4,522	\$7,921	\$12,545	\$17,812	\$21,510

The figures in this table are a pretty accurate index of the capital accumulation from these sources during 1915 and 1916. But for 1917 and 1918 they overstate the matter for two reasons. After the United States entered the war, considerable portions of corporate surplus were invested in government securities. Since this table includes both of these items, there is some double counting. Then, too, we must take account of the fact that corporate savings are here expressed in terms of money, and in times of rising prices and increased inventories the surplus does not represent a commensurate excess of physical production over consumption.

Furthermore, there was a very considerable purchasing of securities with bank loans. These must be deducted from the evidences of capital investment above in arriving at the savings of the people. The total of such loans on December 31, 1918, together with the investments of the banks themselves in war obligations and war paper, amounted to \$4,300,000,000 for the members of the Federal Reserve System. These items for all banks in the United States were, therefore, not far from \$6,000,000,000. The three items may amount to as much as eight billion dollars in 1917 and 1918. If we deduct four billion dollars from the figures for each of these years, the remaining totals will be as follows:

TABLE VIII

1913.....	\$4,522,000,000
1915.....	7,921,000,000
1916.....	12,545,000,000
1917.....	13,812,000,000
1918.....	17,510,000,000

This table includes nothing for the reinvested savings of enterprises not under the corporate form of organiza-

tion. Most mining and manufacturing is carried on by corporations, but the great mass of mercantile and professional activity is still under the private or copartnership form of organization. The savings of these establishments are large and no doubt increase in somewhat the same ratio as do those of corporations.

Savings of Farmers

The other important omission from the table is the savings of farmers. These no doubt increased enormously in 1917 and 1918. In the former year only a small part of these were brought to the investment market by the farmers themselves. Agricultural savings were invested, as they normally are, in the extension and improvement of farm machinery and farm buildings and in the increase of live stock; or in the payment of indebtedness such as mortgages, bank loans and notes to manufacturers of farm machinery. The farmer's capital accumulation depends more largely upon his product than upon any other single factor. The expenditures of his family are rather constant, and increases in the value of his product constitute in large part a savings fund. The increased value of farm products in the United States during the war made it easy for the farmers to save without any additional abstinence. The Department of Agriculture gives the following figures for value of farm products, 1911-1918, based on prices at the farm. (See Table IX.)

Previous to the war farm savings as evidenced by the increase in agricultural wealth were at the rate of \$1,200,000,000 per annum. The best estimate I have been able to make is that these savings rose to over \$4,000,000,000 in 1917, while in 1918 they

TABLE IX

Value of Farm Products, 1911-1918
(in Millions of Dollars)

1911.....	\$8,819
1912.....	9,343
1913.....	9,849
1914.....	9,895
1915.....	10,775
1916.....	13,406
1917.....	19,331
1918.....	21,386

exceeded \$5,000,000,000. During this period farmers were paying off their mortgages and other indebtedness at a rapid rate. A large volume of these real estate mortgages had been held by life insurance companies which brought the funds to the general investment market when the farmer extinguished his indebtedness. A portion of the farmer's savings, therefore, came to the general investment market in 1915, 1916 and 1917. This movement of funds was in part responsible for the abundant volume of capital available in the investment centers for the repurchase of American securities from abroad and for the absorption of government issues. Insofar as the farmers' savings found their way to the investment market they have already been included in our estimate of savings. But the greater portion of these savings of 1915 to 1917 went into farm improvements, and must therefore be added to the figures of savings already given.

CAPITAL ACCUMULATIONS 1913 TO 1918

When agricultural savings reinvested in farms are taken into consideration, and when due allowance is made for the reinvested earnings of individuals and partnerships, the capital accumulation for the years 1913 to 1918 may be conservatively put as follows:

TABLE X

1913.....	\$6,500,000,000
1915.....	9,000,000,000
1916.....	14,500,000,000
1917.....	18,000,000,000
1918.....	22,000,000,000

The savings of 1918 were made out of a national income which in physical terms was barely maintained at the 1917 level. The price level was, however, higher. The Bureau of Labor Statistics index shows the relative prices of 1918 as 197 per cent as against 175 for 1917; this was an advance of 12.6 per cent. The general publicity campaign which had for its object the reduction of consumption as a war measure resulted in increasing savings expressed in money terms over 20 per cent. In 1918 approximately 30 per cent of our national income appears to have been saved.

FACTORS IN CAPITAL ACCUMULATION

Several important generalizations concerning the factors which determine capital accumulation can be drawn from our experience during the last five years. The volume of capital accumulation is affected first and foremost by the volume of productive output. Every increase in production leads quite directly to an increase in capital accumulation. Conversely every fall in productive output will reduce it. Second, other things being equal, capital accumulation is likely to be largest when the share which goes to profits is large. The organization of our industry under the corporate form and the principles of financial management which dominate the corporate institution inevitably work to that end. Third, it is possible to stimulate thrift by popular education.

VOLUME OF SAVINGS FOR 1919

In 1919 the volume of capital accumulation will be decidedly less than in previous years, even when reckoned in terms of money. This is true despite a further increase in prices. The level of wholesale prices for the year 1919 will average at least 210. But production has fallen off by more than 10 per cent, and with the continuation of the coal shortage may be as much as 15 per cent below that of 1917. This decrease in output would naturally lead to a serious curtailment of savings as compared with the high point reached during the war. With the higher standards of consumption to which the great mass of our people have become habituated, and with the smaller profits and larger dividends of our corporations, the volume of savings measured in physical quantities will fall to the pre-war level.

The farmers of the country are enjoying unprecedented prosperity, and are probably contributing as much to our supply of capital as they did during the war. But we cannot hope to maintain the rate of capital accumulation of the last four years in the face of falling production. The one practical method of increasing it is by the encouragement of thrift. The ideal method of increasing it would be through the maintenance of that high level of productive output of which we found ourselves capable during the war. But with capital and labor in their present moods and with a woeful lack of statistical and other information necessary for the proper coördination of production and demand, the admonition to increase production is a counsel of perfection. The encouragement of thrift remains, then, the one practical method for increasing the supply of capital at this time.